

This listing of claims will replace all prior versions and listings of claims in this application:

b.) Listing of Claims

1. (cancelled)
2. (cancelled)
3. (cancelled)
4. (cancelled)
5. (cancelled)
6. (cancelled)
7. (currently amended) An optical system as claimed in claim 9, wherein the ultraviolet Achromatic Fresnel lens for radiation has a wavelength of with a 13 to 14 nanometers wavelength comprising and the objective comprises a zone plate made from molybdenum (Mo), niobium (Nb), Technetium (Tc), or Ruthenium (Ru).
8. (cancelled)
9. (currently amended) A An optical system comprising:
  - an extreme ultraviolet radiation source;
  - a spectral filter that filters ultraviolet radiation generated by the source;
  - a reflective condenser that directs the ultraviolet radiation onto a target;
  - an aperture for spatially filtering the ultraviolet radiation; and
  - an objective lens that forms an image of the ultraviolet radiation from the target; and
  - a spatially resolved detector for detecting the image formed by the objective lens.

10. (original) An optical system as claimed in claim 9, wherein the source is a laser-plasma source.
11. (original) An optical system as claimed in claim 9, wherein the source is a gas discharge source.
12. (currently amended) An optical system as claimed in claim 9, wherein the ~~spectrum~~ spectral filter is a multilayer notch filter.
13. (original) An optical system as claimed in claim 9, wherein the condenser is a multilayer coated spherical surface.
14. (currently amended) An optical system as claimed in claim 9, wherein a virtual source of the extreme ultraviolet radiation source formed by the condenser and ~~the~~ a region of interest of the target, which is a mask, reside ~~residing~~ on a Rowland circle determined by the condenser.
15. (original) An optical system as claimed in claim 9, wherein the detector is a CCD camera.
16. (original) An optical system as claimed in claim 9, wherein the detector is a CMOS camera.
17. (original) An optical system as claimed in claim 9, wherein the objective lens comprises an achromatic Fresnel optic with a silicon refractive lens.
18. (original) An optical system as claimed in claim 9, wherein the source uses emission from a copper target.
19. (original) An optical system as claimed in claim 9, wherein the objective lens comprises an achromatic Fresnel optic with a refractive lens made from copper.
20. (new) An optical system as claimed in claim 9, wherein the objective lens comprises a zone plate lens.